ISLAMIC INSTITUTIONS, THE STATUS OF WOMEN, AND ECONOMIC GROWTH

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Michael E. Glover

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Approved by:

Dr. Ruth Uwaifo-Oyelere, Advisor
School of Economics
Georgia Institute of Technology

Dr. Byung-Cheol Kim
School of Economics
Georgia Institute of Technology

Dr. Rehim Kilic
School of Economics
Georgia Institute of Technology

Date Approved: January 13, 2010

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NOMENCLATURE

Below are the definitions of the variables used in this study. In parentheses next to the variable name is the abbreviation that will be used for the tables, if an abbreviation is used.

Percentage Muslim (percMus): the percentage of Muslims in the country.

Religious Fractionalization (relFrac): the probability that two random people drawn from the population would belong to different religions. The religions are divided more or less broadly depending on the proportion of the members of a religion. For example, in Italy where there are few Muslims, the categories are split into Roman Catholic, Muslim, and Atheist, but in Iraq where there are mostly Muslims and few Christians, the categories are more specific within Islam yet broader for Christianity, so that the categories are Shii Muslim, Sunni Muslim, and Christian (Encyclopedia Britannica 2001).

HDI (hdi*YY*): the Human Development Index is a summary of a country's achievement in attaining (1) A long and healthy life (2) Access to knowledge and (3) A decent standard of living. It is computed as an equally weighted average of normalized levels of life expectancy at birth, education (which is two thirds adult literacy rate and one third gross enrollment ratio), and GDP per capita (UNDP 2008).

Birthrate (birth): the average annual number of births during a year per 1,000 persons in the population at midyear; also known as crude birth rate. The birth rate is usually the dominant factor in determining the rate of population growth. It depends on both the level of fertility and the age structure of the population. (CIA (2008) as cited by Nationmaster).

GDP Growth Rates *YY*-*YY* (gr*YY*-*YY*): the average of the growth rate of Real GDP Chain per capita for the years *YY* to *YY* (for example, 1990-1999 would be gr90-99) (Heston et. al 2009).

CGDP: purchasing power parity adjusted Gross Domestic Product per Capita, current price (Heston et. al 2009).

RGDP: purchasing power parity adjusted GDP per capita (Constant Prices: Laspeyres) (Heston et. al 2009).

Corruption Index (corrupt): this index ranks countries in perceived levels of corruption, according to entities within the country, with 10 being the best and 1 being the worst (Transparency International 2008).

Polity IV (Polity*YY*): polity IV variable ranks countries on a 21-point scale by the political style of the rule of the regime, with -10 being the most authoritarian, and +10 being the most democratic. The 1970s figure is the average for all of the 1970s, and so on. One difference in my approach from the creators of the index is that I coded an "interregnum" period (anarchy or no effective central government) as a missing value

instead of zero. I did this because I thought that a period of "-9" authoritarianism from 1960-1975, then a five-year "interregnum period," then a return to "-9" authoritarianism ought to receive an average score for the 1970s of -9, instead of -4.5 (Marshall 2009).

Battle deaths (battleD): the total number of battle deaths occurring on that country's soil from the period 1946-2005. When a particular conflict was listed as occurring in two or more locations, the total deaths for the conflict are divided by the number of locations, and each country is allotted the average deaths per location, though this may not necessarily reflect the actual distribution of deaths across locations in the conflict (Lacina and Gleditsch 2005).

Freedom House Score (FHscore): each country is assigned a numerical rating—on a scale of 1 to 7—for political rights and an analogous rating for civil liberties; a rating of 1 indicates the highest degree of freedom and 7 the lowest level of freedom. The two scores are combined to make the total freedom house rating. The political rights rating is derived from an analysis of the electoral process, political pluralism and participation, and functioning of the government. The civil liberties rating is derived from an analysis of freedom of expression and belief, associational and organizational rights, rule of law, and personal autonomy and individual rights (Freedom House 2009).

Restrictions on Minority Religions (restrMinRel): a composite variable summing up the values of 16 different variables that describe the degree of religious discrimination against minority religions across a particular dimension. The variable for each particular dimension can range from 0 to 3, and so the composite variable can range from 0 to 48. The average value of this variable over the years available, between 1990 and 2002, is taken. (Fox 2009)

Official Religion (offRel): Coming from Jonathan Fox's Religion and State dataset, the variable is coded as:
0. The State has no official religion
1. The state has multiple established religions
2. The state has one established religion
For our sample of Muslim-majority countries, there are no states with multiple established religions, only states with one, Islam, or none. (Fox 2009).

In Practice How State supports one Religion over another (relgStat): also from Fox (2009), this variable measures the extent to which, in practice, a state supports one religion over another. This variable is necessary because while Iran, Saudi Arabia, and the UK all have official religions, most would agree that the actual preference given to certain religions in these states is different. Coded as follows:
0. No (minority) religions are illegal and there are no significant restrictions on minority religions.
1. No (minority) religions are illegal but some or all (minority) religions have practical limitations placed upon them or some religions have benefits not given to others due to some form of official recognition or status not given to all religions.
2. No religions are illegal but some or all (minority) religions have legal limitations

placed upon them.
3. Some (minority) religions are illegal.
4. All (minority) religions are illegal

Freedom of the Press Rating (freePress): our examination of the level of press freedom in each country currently comprises 23 methodology questions divided into three broad categories: the legal environment, the political environment, and the economic environment. For each methodology question, a lower number of points is allotted for a more free situation, while a higher number of points is allotted for a less free environment. Each country is rated in these three categories, with the higher numbers indicating less freedom. A country's final score is based on the total of the three categories: A score of 0 to 30 places the country in the Free press group; 31 to 60 in the Partly Free press group; and 61 to 100 in the Not Free press group (Freedom House 2009).

Gender-related Development Index (grdi): calculating the GDI involves three steps.
Step 1: Unit-free indices between 0 and 1 are calculated for females and males in each of the following areas:
1. life expectancy,
2. education (the adult literacy rate and the combined primary to tertiary gross enrollment ratio),
3. estimated earned income (at purchasing power parity US$).
Step 2: For each area, the pair of gender indices are combined into an Equally Distributed Index that rewards gender equality and penalizes inequality. It is calculated as the harmonic mean of the two indices.
Equally Distributed index = [(female share of population)/(female-index)+(male share of population)/male-index)]^-1
Step 3: The GDI is the unweighted average of the three Equally Distributed Indices: Equally distributed life expectancy index, Equally distributed education index, Equally distributed income index.

Adult Literacy Rate Females as a Percentage of Males (litFem): Self-explanatory. The rate of female adult literacy divided by the rate of male adult literacy (UNICEF 2009)

Mean age of Marriage of Women (marAge): estimate of the mean age at marriage for a given population in a period of time which is derived from the estimation of never-married women from survey or census data. (United Nations, Department of Economic and Social Affairs, Population Division (2004) as cited by OECD)

Polygamy: acceptance of polygamy (i.e. the practice of marriage in which a person has more than one spouse) within a society (between 0=no and 1=complete acceptance). (Lang (1998) as cited by OECD)

Parental Authority (parent): parental authority granted to father and mother equally (between 0=yes and 1=no) (Lang (1998) as cited by OECD).

SUMMARY

Within the sample of Muslim-majority countries, the links between how explicitly "Islamic" a society is, the status of women, and economic and other societal outcomes is explored. A country is considered more or less "Islamic" depending upon if Islam is the official state religion, if Islamic law forms a basis for the legal system, and the degree to which the country has rejected or maintained traditional Islamic norms such as regarding the acceptance of polygamy and the legal obligation of women to wear the veil in public. It is found that if a country is more "Islamic," it tends to also have worse outcomes along different dimensions, such as degree of authoritarianism and absence of women's rights. However, focusing exclusively on whether the country has Islamic law as a basis of the legal system, these countries tend to be richer. An extremity index is composed, which contains only variables which describe the status of women in Muslim countries, along educational and legal dimensions. It is found in regressions that this extremity index is a statistically significant predictor of economic growth, where higher extremity leads to lower GDP growth rates. Oil is still an extremely important factor in explaining the variation in GDP levels and growth rates in the Muslim world.

CHAPTER 1

INTRODUCTION

Numerous researchers have investigated the phenomenon of Islam's effect on economic growth. Some have concluded that Islam has a negative effect on growth, others say it has a positive effect, while others say it has no effect. In general, the results have been inconclusive. It is my opinion that most of the studies suffer from a lack of nuance. An author attempts to study if Islam has an effect on growth, so she conducts a regression trying to explain economic growth with the percentage Muslim in a population, focusing on all countries that have at least 20% proportion Muslim. Suppose she finds the coefficient on percent Muslim to be insignificantly related to growth. She would then conclude that Islam is not a significant causal factor in growth. However, there are some flaws in this reasoning. The assumption is made that a country with 99% population Muslim, like Tunisia, is "more Islamic" than a country with 88% Muslim, like Bangladesh. However, there is no *a priori* reason to suspect that Islam is a less important force in the structuring of society—legally, politically, economically, or even socially—in a country like Bangladesh as opposed to Tunisia. Similarly, this reasoning leads to the conclusion that two countries with approximately the same percentage Muslim, take Turkey (99%) and Iran (99%), are "equally Islamic." Now, Turkey is a state with a long history of a secular tradition upheld in government and society, where the most strongly secular force, the military, has even staged several coups over the second half of the twentieth century when it felt that the civilian head of state was flirting too much with Islamicizing the country. Iran, on the other hand, is a country that experienced a dramatic

societal transformation where fundamentalist Islam took an explicitly dominant role following the Islamic Revolution in 1979. The main point is that there are different expressions of Islam that could have markedly different effects on economic outcomes, and a researcher who regresses an economic variable on percent Muslim does not appreciate this fact.

What do Westerners think of when they think of Islam? Most must admit that some of the images that come immediately to mind are extremist acts, oppression of women, and in general backwards societies. However, any Westerners that have Muslim friends or acquaintances, or at least try to pay attention to the world around them, must acknowledge that these images certainly do not apply to the vast majority of Muslims. Moreover, any sensitive observer of the world must attest to the fact that within any religion, there is large variation in terms of expression, degree of adherence, views of the infallibility of the original texts, and interpretations of important points. This is true in all religions. One might call himself Catholic, but not attend Mass but once a year, not pray or read the Bible ever, and not believe the Bible to be the word of God. One might call himself Muslim, but likewise be very lax in his practice, and more secular-minded in his perspective of the Quran. Another might be very strict with his daily routine, very devout, and orthodox in his beliefs.

Like any major religion, Islam has numerous different schools of thought and countless variability in local expressions. However, I feel there are broad distinctions that can be made. One might call a Muslim who believes that all women should be covered head-to-toe “fundamentalist” or “backwards,” whereas others might call him “old-fashioned” or even “orthodox.” On the other hand, a Muslim who is proud to see a

woman as head of state in his own country could be called "liberal" or "modern." This of course runs the risk of oversimplification, as a Muslim might believe that the *hijab* (just the head covering) is a religious requirement for women, yet be supportive of female political participation (this could describe many people in Turkey). However, I think the idea that the spectrum of different expressions of Islam falling along a line from "old-fashioned" to "modern" is useful and describes the reality of different people's tendencies and beliefs. I also believe it could be useful to classify whole societies.

In this paper, I use what I call an "extremity index" to summarize where a particular country falls on the range of moderate/liberal to backwards/extreme. This measure is a weighted average of different variables which I considered to be acceptable proxies for how "old-fashioned" the expression of Islam in the country is. Various variables were tried, where the two final indexes consist of measures of the gender gap in education, a measure of the obligation of women to wear the veil in public within the country, and a measure of the difficulty for women to obtain land, loans, and other property. Other measures are explored in the descriptive statistics section that serve as demonstrations to how extremity along certain dimensions relate to extremity along other dimensions.

An important input into the different formulations of the extremity index is the difference between the total percent of students enrolled in secondary school who are girls and the percentage of girls who are under 15 in the population. I feel this is a good measure because the belief that boys should be given priority in education because the girls will not need it when they are older is widely regarded as an outdated idea. In addition, Islam is widely regarded, at least in the eyes of most Westerners, to be a

religion that at least in its most fundamentalist form is repressive of women to some degree. Therefore, a Muslim society that tends to have a lower percentage of girls enrolled in secondary school will be viewed as a more "old-fashioned," less "progressive" expression of Islam. I will call this measure "measure of discrimination of girls," though this is an imperfect descriptor. Some of the societies that have a lower percentage enrolled are not necessarily discriminating against girls. Perhaps it is a truly practical consideration which results in the lower percentage. However, this variable is linked with other forms of bias against women, which cannot be justified economically.

There is some good evidence to support the notion that variation in gender equality in education can directly explain some of the variation in economic growth rates across countries. This will be addressed below, but this paper takes the stance that the gender inequality measure, coupled with the other discrimination against females measures is a proxy for something deeper, and that the significant explanatory power of gender inequality in growth regressions in this sample of Muslim countries is not fully due to the direct causal affect of gender inequality on economic growth, but rather the measure is a proxy for the "expression of Islam" dominant in the country. First, it should be demonstrated that this measure is adequate to proxy for a broader and much less observable quality, the "expression of Islam" in a country; i.e. that a higher level of gender discrimination implies a more "old-fashioned" expression of Islam. Second, it should be demonstrated that this "old-fashioned" Islam could be an inhibiting factor on growth.

First, I will address the issue of the status of women in the Islamic world before the most transformative European encroachment in the 19th century and onwards. Leila

Ahmed, in her book *Women and Gender in Islam* (1992), provides a thorough account of this issue, of which I will give a few relevant facts and thoughts. Ahmed describes how the scholarly establishment has hailed the documentary evidence showing that women in the medieval Islamic world inherited and owned property and pursued their economic interests, even in court. But she emphasizes that women were active within very limited parameters permitted by their society, limited to acquiring property essentially through gift or inheritance, whereas areas of the economy in which wealth might be aggressively acquired were by and large closed to women (pp. 111-112).This supports the idea that access to land, loans, and other property may be a good proxy for the degree of old-fashioned-ness of the expression of Islam in society.

She describes the legacy of the conglomeration of the authoritative texts in the period of the Umayyad and Abbasid dynasties (the rulers of the Islamic world after the early period of Muhammed and his first few successors):

> In sum, then, the moment in which Islamic law and scriptural interpretation were elaborated and cast into the forms considered authoritative to our own day was a singularly unpropitious one for women. The heritage of the Umayyad and in particular the Abbasid society played a significant part in determining the extent to which the elaboration of the law would be weighted against them. (p. 100)

It seems clear to me that the status of women in medieval Islam was low. As Europe became more and more important in the cultural and political life of Middle Eastern Muslims, a social transformation in gender issues was occurring. Ahmed writes that the influence of Europe was on the whole a great advance for women:

> […] in crucial ways the outcome of the process of change the [European political and cultural] encroachments set in motion was broadly positive, because the social institutions and mechanisms for the control and seclusion of women and for their exclusion from the major domains of activity in their society were gradually dismantled. The social system had combined the worst features of a Mediterranean and Middle Eastern misogyny with an Islam interpreted in the most negative way possible for women, and Middle Eastern women have no cause to regret its passing. (p. 128)

She describes how the transformations took place with varying degrees in various places and at various times:

> The direction of change was similar for the Middle East as a whole, though the pace of change differed from country to country. Egypt and Turkey and to a lesser extent Syria, where European products first entered the market, were in the vanguard, whereas the Arabian Peninsula was less directly affected until well into the twentieth century (p 129-130).

Hence, the European influence differed throughout the region, which would explain part of the reason why one society might condone the presence of women in any place in the workforce, whereas another might restrict women to very narrow spheres (of course European influence is not the only factor, and individual country historical and social developments matter).

So we can see that European encroachment had a dramatic transformative effect on Middle Eastern society, and affected the lot of women in addition. Also, it affected different places in varying degrees. Ahmed also gives a telling account of how European

influence led to education for women. She describes how the Islamic world's desire to "catch-up", led by the state's aggressive pursuit of educational modernization and technological and social reform had enormous and enduring consequences for women (p. 134). In many lands, the state promulgated women's education, and men who were educated in the "modern" schools or who traveled to Europe to study called for reforms in the social arrangements regarding women. Muhammad 'Ali, the viceroy of Egypt in the first half of the 19th century eagerly sought to strengthen his country militarily and technologically and catch up with Europe, sending student missions to Europe to learn military and engineering sciences. Al-Tahtawi, a director of a translating school in Cairo

> recommended that girls be given the same education as boys, saying that this was the practice in the strongest nations, that is, in European ones. His was the first work to appear in Arabic associating reforms in social mores affecting women with the social and technological reforms for national renewal. Muhammad 'Ali much admired al-Tahtawi's book and recommended its general use with students. Shortly thereafter the state, at least rhetorically, adopted the view that educating women was desirable (p. 134).

Now I have rounded out the first part of my argument, that the degree of modernization of an Islamic country can be correlated with the degree of female equality in education and the degree of women's rights in other spheres, such as regarding the ability for women to obtain land, loans, and other property. In general, the degree to which a society has rejected an older Islamic norm such as male-biased inheritance, or the obligation to wear the veil in public, can be regarded as a measure of how "modern" the expression of

Islam is in the country. Now I will describe how an "old-fashioned" type of Islam could be inhibitory to economic growth.

One way in which "old-fashioned" Islam may inhibit growth is through a disdain for foreigners, and especially the West. Timur Kuran, economist and Islamic economics scholar, writes that Islamic norms require Muslims to limit, if not shun, economic relations with non-Muslims, even with nonconformist Muslims (2004). Of course there are many economic relationships between Muslims and non-Muslims across the world, but some of the more fundamentalist Muslim leaders seem to discourage interrelationships with the West. Mawdudi, an influential Pakistani Islamist leader of the mid-twentieth century, and one of the founders of what would be called "Islamic economics," blamed Western influence for domestic problems as he criticized some of his countrymen, claiming that being brainwashed to think like Westerners, the nationalists were trying to refashion Islam in the image of irreligious Western materialism (Kuran 85).

A disdain for anything Western may cause powerful Islamist policymakers in the Muslim world to promote isolationist economic paths which hinder growth. After the Islamic Revolution in Iran, the leaders of the new Republic nationalized banking because they felt that, in the pursuit of profits, the private owners of the banks used their financial resources for unproductive projects that were against the will and interest of the public (Zangeneh and Salam). Total credit fell during the first 10 years of the Revolution, which probably contributed to the overall economic decline experienced after the Revolution. More pertinent to the idea of anti-foreign sentiment, the percentage of credit devoted to international trade fell from 10.2 percent of the total in 1977, to only 0.8 percent in 1987.

Since there is good evidence that trade openness positively affects growth, a closed-off economic stance could be another drag on growth.

On the other hand, some Muslim-majority countries in Asia have done very well economically over all, particularly Malaysia (Noland and Pack). Both have relied heavily on Chinese expertise in entrepreneurship and their extensive international marketing and financial networks, but despite considerable success, there is still great unease with the Chinese minority, and government policies are undertaken to placate the majority. This example illustrates that there is much to be gained economically when Muslim leaders open their economy and let foreigners bring to the Table what they have to offer, and it illustrates that a large portion of Muslims still harbor disdain of the foreign presence and can influence policy to close off the economy to the disadvantage of the economy as a whole.

Xenophobia is not unique to the Muslim world. It is a problem to a greater or lesser extent in most regions of the globe, including the rich industrialized nations. However, with in the Muslim world, the most ardently anti-Western countries would tend to be the most "old-fashioned" in their interpretation of Islam, and plausibly the most backwards in their approach to gender equality. This means that this old-fashioned Islam could adversely affect Muslim economies not merely through the lower quantity of human capital through gender discrimination in schooling, but also through the proven-to-be detrimental effect of isolating one's economy from the outside world.

Another reason expressions of Islam that are "old-fashioned" might tend to decrease the economic prosperity of a nation arises from the history of the founding and spread of Islam. It is related to the way in which Muslim leaders and peoples acquired

their wealth in their early history, relying to a large extent on conquest. Ibn Khaldun, a famous 14th century Muslim thinker, gave a theory to explain the flowering and decay of Muslim states. Khaldun's theory and an explanation are put forth well by Islamic economics scholar Timur Kuran:

> Ibn Khaldun observed that Muslim states were typically founded by nomadic warriors motivated by the promise of booty and glory. The warriors would subjugate, unite, and organize sedentary populations, then settle down themselves. Their descendants, raised in calm and comfort, would possess neither the predatory urges nor the dynamism that led to their state's creation. Content to preserve their gains, they would make their states vulnerable to conquest by a fresh band of ambitious nomads prepared to work for a more advanced socioeconomic order. In Ibn Khaldun's account, then, the main source of economic progress is conquest motivated by looting; without conquest, states would only decay, because they lack an internal engine for change. The religious connection comes from the legitimacy that Islam has bestowed upon conquest. Not only did conquest play an important role in the first Islamic state's expansion but the fundamental sources of Islam justify its use in promoting conversions. Insofar as the emphasis on conquest discouraged the creation of new wealth, religion would have restrained intensive economic growth. At the time Ibn Khaldun wrote, the Islamic world was more than two centuries away from the peak of its European expansion. It is amazing, therefore, that he worried about the decline of scientific learning in Muslim countries and that he expressed admiration for philosophical advances in "the land of Rome." Evidently, he

> sensed that an internal engine of economic development would ultimately outperform an external one based on conquest. (Kuran)

Interestingly, later on the Ottoman rulers, aware of a rising Europe and a declining Empire, judged that the West's increasing dominance was derived entirely from superior weaponry (Kuran). They did not grasp that there was a strong economic engine that under-girded all of these innovations (Kuran). Therefore I see much interest in the weaponry of Europe from the Ottomans, but practically no interest in the methods of commerce and trade of Europe (Kuran).

We see now some historical reasons why the Islamic world has lagged behind the West for hundreds of years. Some of these may include an exclusion of women from society, an undue appreciation for the use of conquest to acquire wealth, and a lack of interest in foreign economic and technological innovations outside of weaponry. (The reasons are much more complex than this, and Kuran (2004) is a good source for understanding some of the historical developments that have led to the economic underperformance of the Islamic world relative to the West). I also have noted some of the economically beneficial effects experienced by Muslim nations by opening their societies to Western influences, especially opening their societies to the idea that women should be educated as well as men. In addition, we have seen evidence that—for various historical reasons—nations received varying levels of exposure to these influences. Also, different attitudes towards the West persist in different countries, and some of the more extreme "expressions of Islam" tend to harbor strong anti-Western sentiments which could negatively affect their economic well-being. These findings indicate that the level of discrimination against women in various areas could be a useful proxy for the "type of

Islam" dominant in a country. Before proceeding to the results of the statistical study I conducted, I should review the relevant literature about Islam and economic growth, and then the relevant literature about gender inequality and economic growth.

CHAPTER 2

LITERATURE REVIEW

Islam and Economic Growth Literature

Much has been written on the topic of Islam's relation to economic prosperity. A valuable resource to understand the argument that Islam inhibits economic growth is Hillman (2007). He presents statistics comparing the economic status of Muslim countries with their non-Muslim neighbors, demonstrating that the Muslim countries on the whole tend to under-perform their non-Muslim neighbors. He also writes that radical Islam tends to value the spread of Islam and the re-conquest of formerly Muslim lands at the expense of economic progress. He notes that

> In contemporary times, not all Islamic rulers and states actively abide by the supreme values. To do so would require an ongoing active state of war against non-Islamic societies. Radical Islam does, however, actively seek the priority supreme-value objectives.

In a vein of work similar to this paper, he distinguishes between radical Islam and non-radical, seeking to explore the effect of radical Islam on own populations. He notes that oil wealth is an important pre-requisite for relative affluence in the Middle East, and that of the non-oil countries, those with explicitly secular governmental frameworks and/or significant non-Muslim minorities (Turkey, Tunisia, Lebanon) have higher incomes.

In contrast to works that emphasize the growth-inhibiting quality of authentic Islam, Askari and Taghavi (2005) argue that Islam, being the only major religion that imparts detailed prescriptions for the economic life of its followers, prescribes guidelines

that if followed correctly will lead to economically prosperous and just societies. They use the Quran and other foundational texts of Islam in an attempt to demonstrate that such good qualities as pluralistic democracies, economic prosperity and growth, employment, and education are societal requirements placed upon leaders in Muslim lands, and that the paucity of these qualities in Muslim lands reflects the shortcomings of state authorities and their interests in maintaining the political status quo, not any shortcoming in Islam as a religion. My paper will not explore in-depth the relevant passages in the Quran or Hadith to investigate this view. Rather, it will take various indicators of a more "old-fashioned" type of Islam and investigate the link between those indicators and growth.

Helble (2007) explores "Is God good for trade?" and cites historical reasons to believe that Islam would be conducive to international trade, with his hypothesis verified in contemporary statistics, according to his model.

An interesting paper exploring the effects of Islam on a developing country's economic institutions and performance is Pryor (2006). He uses the percentage of Muslims in each country as a proxy variable for the influence of Islam in that country. (Above, I argued that this is not an accurate proxy for the influence of Islam in a country.) He notes that though Muslim countries tend to be poorer than the world average, they are not poorer amongst the set of developing countries; i.e. they are not the poorest of the poor. He writes that though some have argued that in Islam there is no "separation of mosque and state," few current Muslim states have featured the type of theocratic government implied by this statement, other than Iran and Taliban Afghanistan. However, I think this statement hides the fact that these are not the only two

countries where classical Islamic texts play a significant role in the legal system, and that just because a theocratic-style government does not prevail in a country, it does not mean that the laws and institutions are fully secular. However, his observations that "in many nominally Muslim countries, religious injunctions are not incorporated into economic institutions or governmental policies" (p. 1817) and "some doctrines are obeyed only in form (but not in content) or are simply disregarded" (pp. 1817 – 1818) are important, and are foundational ideas to this paper. He argues that induction ought to be preferred over deduction in gauging the effect of Islam. He reasons that an argument based on the tenets and doctrines of Islam will encounter problems, due to the above facts of variation in adherence and in application to societal structure. The greatest innovation in his paper is the use of cluster analysis to explore the possibility that Islamic countries can be grouped together in an economic institutional system. He finds that this is not the case.

The main innovation in this paper is that like Pryor I use an inductive, rather than purely deductive, approach to exploring the effect of Islam on growth, but for my proxy of the effect of Islam on society I use various cultural indicators related to the status of women and the influence of Islam in the legal system of the country.

Gender Inequality and Economic Growth Literature

There has been thorough analysis conducted on the issue of the relationship between gender inequality in education and economic growth. The main finding is that gender inequality in education is correlated with lower growth rates, above and beyond the direct effect of the reduction in human capital from educating females less. Countries with equal average years of schooling for the whole population will tend to have lower growth rates and lower incomes if they have higher gender inequality.

There are good theoretical reasons brought out in papers on this subject for why I would see this correlation. Authors of papers on this subject note the economic channels through which the lower growth could result, (1) lower average human capital on the whole; (2) less educated mothers can mean less educated and capable children, since children often spend a greater time with their mother than with their father in their childhood.

These theoretical channels seem legitimate to me; however, I do not believe that they explain fully the correlation observed between economic growth and gender equality observed in my sample of Muslim countries. The historical account given concerning the European encroachment and its effects on women's education provides evidence for the idea that the gender equality measure can also be used as a proxy for degree of historical openness to the West and degree of modern-ness of Islam in the country.

Dollar and Gatti (1999) note that "It is possible that income affects gender inequality; that gender inequality affects growth and hence income; or both. Or, it may simply be that common underlying factors determine both income and gender inequality" (p. 1). This paper takes the stance that there are common underlying factors determining both income and gender inequality in the sample of Muslim countries, and that the common underlying factor is the specific religious/cultural preference of those who hold power in these countries.

Dollar and Gatti write, "The econometric evidence suggests that societies have to pay a price for gender inequality in terms of slower growth. However, the fact that religion variables systematically explain differences in gender inequality suggests that some societies have a preference for inequality and are willing to pay a price for it. (It

would perhaps be more accurate to say that those who control resources in the society have a preference for gender inequality that they are willing to pay for.)" (p. 3). They find that high female attainment is associated with Protestant Christianity and that low achievement is associated with the Muslim and Hindu religions (p. 12). In their study, the religious variables used as independent variables to explain gender inequality indicate the share of the population that follows a particular religion. For reasons cited above, this may not be the best approach to gauge the effect of Islam.

Lagerlof (2003) argues that the economic and demographic development in Europe over the last couple of millennia is related to long-term changes in gender equality. He argues that the spread of Christianity led to the increase in gender equality, giving the example that, "beginning in Roman times, Christians allowed women to hold positions within the Church, improved the treatment of widows, and extended women's rights to inherit and hold property". He develops a model where greater gender equality gradually leads to increases in per capita income, increases in population growth rate, further increases in gender equality, and eventually a decrease in population growth rate. It is a premise of this paper that variation in European influence within the Islamic world, which through Christianity is linked with greater gender equality and other positive social developments, such as respect for human rights and accountability of the rulers to the ruled, explains some of the variation in economic outcomes in the Islamic world.

CHAPTER 3

DESCRIPTIVE STATISTICS

In this section, I present descriptive statistics to paint a picture of the different kinds of countries in the Muslim world. We are interested in the relationships between variables which indicate: the situation for women, being unequal and repressive or fair and accommodating; the role of Islam in the state, explicitly Islamic or not; how Europeanized are norms related to gender (polygamy, male-biased inheritance); how free and democratic is the society; how are minority religions treated; and how all of these variables relate to level of income, and more broadly, economic development as measured by HDI. Correlations are described below, and then in the next section I divide the sample into categories by whether the country is "high", "medium", or "low" along a particular variable. I then take each of the three groups and take means for the other variables within each group and see how the levels of the other variables compare across the "high", "medium," and "low" group. When examining the descriptive statistics, it will be helpful to remember that the variables related to societal/institutional treatment of women, such as the variables called polygamy, parental, inheritance, violWom, missWom, freeMoveWom, veil, and landLoanProp are all coded on a scale of 0 to 1, where 1 is the "least modern" or in many cases unequivocally the most weighted against women. For examples, missing women is 1 if there are more missing women in this country than any in the sample, and 0 if there are as many women as men in the country; veil is 1 if there is complete obligation to wear the veil in public in the country, and 0 if there is none.

Correlations

In this section, I present the correlations of a particular variable of interest with other variables, in order to portray a picture of what characteristics are associated with other characteristics in the sample of Muslim-majority countries.

Institutions Related to Gender and Other Variables We Care About

Table 1: The correlation of the veil variable (full obligation to wear the veil in public = 1, no obligation = 0) and other variables we care about.

FHscore	FHcl	restrMinRel	offRel	freePress	sharia
0.37**	0.39**	0.55***	0.35*	0.33*	0.47***

polygamy	inherit	miss	freeMov	land	prop
0.38**	0.45**	0.59***	0.67***	0.46**	0.36**

Table 1 reveals that obligation to wear the veil in public is associated with less freedom as measured by freedom house and less freedom of the press, more restrictions on minority religions, more likely to have Islam as the official state religion as opposed to no official religion, more likely to have Sharia, greater acceptance of polygamy, more male-biased inheritance, greater number of missing women, greater restrictions on the free movement of women, and less access for women to land and other property.

Table 2: The correlations of the measure of female discrimination in secondary school with other variables.

hdi90	hdi95	hdi00	hdi06	birth	cgdp70	corrupt	restrMin	offRel
-0.56**	-0.64***	-0.74***	-0.79***	0.79***	-0.34**	-0.46***	-0.28*	-0.28*

grdi	litFem	primEd	secEdu	marAge	polyg.	land	loan	prop
-0.78***	-0.67***	-0.86***	-0.86***	-0.71***	0.36*	0.52***	0.41**	0.48***

From Table 2, one can see that greater discrimination of females in secondary school is associated with lower hdi, higher birthrates, lower GDP, greater corruption, more restrictions on minority religions, more likely to have Islam as official state religion, poorer educational outcomes for women measured with other variables, greater acceptance of polygamy, and less access to land, loan, and other property for women.

Table 3: The correlations of the difficulty for women of obtaining land with other variables.

hdi00	hdi06	birth	grdi	litFem	islamLaw	primEd	secEdu	marAge
-0.6***	-0.45**	0.62***	-0.44**	-0.32*	-0.36*	-0.49**	-0.37*	-0.65***

polygamy	freeMov	veil	loan	femDisc	cgdp80	cgdp00	cgdp07	gdp70-07
0.44**	0.58***	0.46**	0.46**	0.41**	-0.35*	-0.47***	-0.43**	-0.4**

From Table 3, one can see that difficulty in obtaining land for women is associated with lower hdi, higher birthrate, lower gender-related development index, lower literacy rate for females, fewer instances of Islam being mentioned as a basis of the legal system, fewer girls relative to boys in school, lower marriage age, greater acceptance of polygamy, greater restrictions on the free movement of women, more obligation to wear the veil in public, less access to loans for women, and lower GDP. The variable describing the difficulty for women to obtain loans has correlations that are quite similar to the above, with the addition that more difficulty for this variable is associated with greater corruption.

Table 4: the correlation of the average real GDP from 1970 to 2007 with variables related to gender.

birth	litFem	primEdu	secEdu	marAge	loan	prop	femDisc
-0.39***	0.5***	0.34**	0.29*	0.44***	-0.4**	-0.43**	-0.36**

From the correlations in Table 4, one can see a few patterns emerging. First, there are a few gender-related variables that correlate significantly with GDP levels over the time period. These variables fall into the categories of education; marriage age; access to

land, loans or property for women; and birthrate. These variables correlate in the directions that I would expect. That is, those countries that tend to have greater equality across gender in education and in access to land, loans and property, and those having a higher average marrying age and a lower average birthrate, tend to be richer. The marriage age and birthrate categories need to be understood in the context of "correlation does not imply causation," as does the education category: increased economic opportunities in an economy as a whole could increase the relative value of participation in the workforce over pure work within the home for women. But correlations concerning the access to land, loans and property for women and GDP show something noteworthy. It shows that a country whose access to land, loans and property for women is lower tends to have a lower GDP. It is certainly possible that less access for women could cause lower average productivity for the population, but I theorize that these particular institutional indicators can be thought of as proxies for a broader shaping of society as a whole. This idea is verified in the observation, seen in Table 5, that out of the 12 institutional indicators that are related to gender--of which some are arguably linked to Islam--the variables that have statistically significant correlations one with another are all correlated in the "correct direction." That is, when one variable, such as women's access to loans, indicates a male-bias or a more old-fashioned kind of Islam, another variable, such as obligation to wear the veil in public, will tend to fall in the same direction. That is, women tend to be obliged to wear the veil in public in places where they tend to have less access to loans. Though not all of the correlations between all of these variables are significant, the correlations that are significant are all in the "correct direction."

Table 5

	marAge	parent	inherit	viol	miss	freeMov	veil	land	loan
parental	-0.3	1							
inherit	0.1	0.43**	1						
Viol	-0.03	0.06	0.07	1					
Miss	0.04	0.21	0.3	0.11	1				
freeMov	-0.27	0.22	0.23	0.14	0.53**	1			
Veil	-0.3	0.14	0.45**	0.29	0.59***	0.67***	1		
Land	-0.65***	0.14	0.08	0.11	-0.11	0.58***	0.46**	1	
Loan	-0.46**	0.18	0.08	0.1	-0.03	0.48***	0.2	0.46**	1
Prop	-0.51***	0.07	0.28	0	-0.17	0.36*	0.36**	0.61***	0.78***

And though not all of the indicators are individually significant with respect to GDP levels, e.g. the veil variable and GDP do not significantly correlate, since the only institutional indicators in this category that are significantly related to GDP are related in the "correct direction," I argue that this category of indicators is relevant to understanding the variation between the GDP levels of these Muslim countries.

Authoritarianism

Islam means "submission" (to God), and Muslim literally means "one who submits." Some scholars have argued that Islam is conducive to authoritarian government. The historical and textual arguments for this idea are the subject of debate outside of the scope of this paper. However, in our sample of Muslim-majority countries, the countries that give Islam a more explicitly prominent role in their governmental system tend to be more authoritarian. This can be seen in Table 6 below, where the countries with Islam as their official religion tend to be more authoritarian than those that have no official religion, as do the countries with Islam as part of the basis for their legal system relative to those that do not have Islam as a legal basis, and the countries that specifically practice Sharia law are more authoritarian than those that do not. Higher authoritarianism is also

found with higher acceptance of polygamy; male-biased inheritance; obligation to wear the veil (only at the 0.12 level); and lower GDP. These correlations taken together suggest that a more explicitly "Islamic" Muslim country may be more authoritarian and also poorer. Tables 7-9, which are based on Freedom House's political rights and civil liberties rating, and their freedom of the press rating, give further evidence that less freedom in a society is correlated with more "Islamic" countries.

Table 6: the correlations of the average Polity score from 1970 to 2007 with other variables. A higher score means more democratic; a lower score means more authoritarian.

hdi06	FHscore	restrMinRel	offRel	relgStat	freePress	grdi	islamLaw	Sharia
-0.29*	-0.6***	-0.35**	-0.36**	-0.26*	-0.52***	-0.29*	-0.44***	-0.28*

polygamy	inheritance	violWom	cgdp00	cgdp07	GDP70-07
-0.32*	-0.32*	-0.25	-0.35**	-0.34**	-0.39***

Table 7: the correlations of the average polity score from 1990 to 2007 with other variables. The significant correlates differed some from the average over the whole period. The additional significant correlates may reflect the recent coding of these variables, which would explain why they would be more significant with an average polity that excludes older years.

hdi90	hdi95	hdi00	hdi06	FHscore	restrMinRel	offRel	relgStat	freePress
-0.43*	-0.41*	-0.35*	-0.34**	-0.72***	-0.36**	-0.35**	-0.23	-0.61***

grdi	islamLaw	Sharia	polygamy	inheritance	cgdp00	cgdp07	GDP70-07
-0.31*	-0.54***	-0.29*	-0.32*	-0.41**	-0.39**	-0.37**	-0.42***

Table 8: The correlations of Freedom House's combined civil liberties and political rights score, where a higher score means less freedom.

corrupt	Polity90s	Polity00s	restrMinRel	offRel	islamLaw
-0.26*	-0.56***	-0.78***	0.35**	0.29*	0.46***

sharia	parent	inherit	freeMov	veil
0.27*	0.28	0.49***	0.33*	0.37**

Table 9: the correlations of the Freedom of the Press rating with other variables, where a higher freedom of the press score means less freedom of the press.

hdi90	hdi00	corrupt	Polity90s	Polity00s	restrMinRel
0.57***	0.36*	-0.28*	-0.49***	-0.64***	0.22

grdi	islamLaw	Sharia	inherit	veil
0.28	0.33**	0.26*	0.42**	0.33*

Corruption

Table 10: the correlations of corruption index and other variables. A higher score on the index means less corruption.

hdi06	birth	gr90-99	cgdp70	battleD	FHscore	offRel	freePress	grdi
0.57***	-0.41***	0.33**	0.59***	-0.32**	-0.26*	0.32**	-0.28*	0.53***

litFem	secEdu	marAge	loan	prop	femDisc	cgdp80	cgdp07	gdp70-07
0.46***	0.34**	0.45***	-0.45**	-0.39**	-0.46***	0.63***	0.68***	0.66***

Corruption is significantly related to GDP levels. It could be interesting to see if any variables arguably linked to Islam are significantly correlated to corruption levels. From Table 10, one can see that less corruption is linked with: lower birthrate; fewer battle deaths; Islam as official state religion as opposed to none; greater score on gender-related development index; larger proportion of female literacy as a proportion of male literacy; larger proportion of females in primary and secondary education; higher marrying age; more access for women with regards to loans and property other than land; and of course higher GDP levels. It is interesting to note that GDP growth from 1990 to 1999 is significantly related to corruption in the expected direction, but growth from 2000 to 2007 is not significantly related. This is possibly due to the boom in oil prices in the 2000s dominating the determinants of growth in the sample and consequently "washing out" the effects of other important institutional variables. This phenomenon will prove as

an important explanation for the strength and then weakness of the extremity indexes in explaining growth in the 1990s and 2000s, respectively.

Battle deaths

Table 11: the correlations of number of battle deaths with other variables.

corrupt	restrMinRel	offRel	sharia	primEd	secEdu	viol	miss
-0.32**	0.36**	0.25	0.38**	-0.42**	-0.27	0.45***	0.58***

Battle deaths upon own soil is used as a proxy for how conflict-prone the country is, though this is an oversimplified interpretation of this variable, since battle deaths on own soil may not reflect that country's tendency to fight or begin conflicts, but could reflect the belligerence of another country involved if the conflict is an interstate conflict. However, I will use this as an imperfect proxy. Islam spread with the sword originally. Given Islamic fanaticism is strongly associated with violence in many Muslim countries, I see the measurement of degree of conflict as a proxy for "type of Islam," where the Muslim countries with the most violence over recent history would be seen as the more "old-fashioned," traditional, or extreme type of Islam[1].

According to Table 11, a higher number of battle deaths in our sample of Muslim countries tends to be associated with: more corruption; greater number of restrictions on minority religions; more likely to have official state religion(s) (0.12 level); more likely for minority religions to have legal limitations placed upon them or be entirely illegal

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[1] It is worth noting that Arabs and Muslims trace their literal and spiritual ancestry, respectively, to Abraham through Ishmael and the bible states that Ishmael would be a father of a great nation and "shall be a wild [donkey] of a man, his hand against every man and every man's hand against him; and he shall dwell over against all his kinsmen,"(Genesis 16:11-12 RSV), meaning that the nation that comes from Ishmael will be involved in a lot of conflict.

(0.12 level); more likely to practice Sharia; fewer girls in primary school (and secondary at 0.12 level) compared to boys; deficiency in laws against violence against women; and more "missing women" (generally due to preferential treatment given to boys at birth and in childrearing).

Restrictions on minority religions

Table 12: the correlations with the measure of restrictions on minority religions and other variables.

relFrac	hdi06	birth	grdi	litFem	islamLaw	Sharia	secEdu	marAge
-0.31**	0.45***	-0.37**	0.4**	0.31**	0.48***	0.46***	0.27*	0.28*

viol	miss	veil	Gr90-07	polity70-07	femDisc	cgdp00	cgdp07	gdp70-07
0.36**	0.38**	0.55***	0.29*	-0.35**	-0.28*	0.33**	0.33**	0.32**

Historically, when Islam has dominated in a society, life has not always been easy for members of minority religions (see "Politically Incorrect Guide to Islam" for a historical treatment of the topic). And in the modern day, members of minority religions in Muslim countries do suffer persecution in many places and sometimes at extremely severe levels. Let us explore the correlates of Jonathan Fox's catch-all "restrictions on minority religions" variable within our sample, examining Table 12. Greater restrictions on minority religions tend to be correlated with: lower religious fractionalization (this could be because where there is a greater presence of minority religions, it will be more difficult to legislate against them, or it could be because in less tolerant lands, there is more pressure to convert to the main religion); higher hdi (this could be because there are several relatively rich and developed countries that have severe restrictions on minority religions); lower birthrate (for same reason as before); higher grdi (high hdi will be correlated with high grdi); greater female literacy; more likely to have Islam mentioned as a basis for legal system; more likely to have Sharia; more females in secondary education; higher marriage age; greater deficiency in laws protecting women against

violence; more "missing women"; less free movement of women allowed (at 0.12 level); women more likely to be obligated to wear the veil in public; higher growth over 90 to 07; more authoritarian in governance; higher levels of GDP. So what basically seems to be going on here is that the countries that tend to place more restrictions on minority religions are rich countries that have a few better gender-equality statistics due to their economic development, but still are "backwards" in many respects concerning the treatment of their women, are authoritarian in their style of governance, and explicitly Islamic in their legal system. The countries with above average number of restrictions (11 or greater) export on average about 1 million barrels of oil per day, while the countries that have below average restrictions export on average about one-quarter million barrels of oil per day. This could explain the differences in levels of income; hence hdi; hence certain gender-related development figures.

Official religion

Table 13: the correlations between having Islam as the official religion, versus having no official religion, with other variables (Muslim-majority countries only).

relFrac	hdi06	corrupt	polity70s	polity80s	polity00s	battleD	FHscore	grdi
-0.35**	0.42***	0.32**	-0.30*	-0.29*	-0.39***	0.25	0.29*	0.42**

secEdu	marrAge	inherit	miss	veil	femDisc	cgdp00	cgdp07	gdp70-07
0.38**	0.54***	0.53***	0.6***	0.35*	-0.28*	0.39***	0.34**	0.37**

From Table 13, one sees that having Islam as the official religion in a state corresponds to having better economic outcomes, less corruption, and a more modernized situation for women along certain dimensions (greater opportunities for education, higher marrying age); however, these places also tend to be more authoritarian, have less freedom in the society overall, have male-biased inheritance, more missing women, and the obligation to wear the veil in public.

Islamic law and Sharia

Table 14: the correlations between having Islam mentioned as a basis for the legal system and other variables.

hdi95	hdi06	corrupt	FHscore	restrMinRel	offRel	relgStat	freePress	grdi
0.52**	0.38**	0.25*	0.46***	0.48***	0.69***	0.41***	0.33**	0.3*

sharia	secEdu	marAge	inherit	miss	land	polity70.07	Polity90.07	gdp70.07
0.3**	0.34**	0.54***	0.52***	0.49***	-0.36*	-0.44***	-0.54***	0.35**

The CIA world factbook contains statistics on legal systems around the world (as cited by Nationmaster). If Islam was specifically mentioned as a basis for the legal system, then the country received a 1 for this variable, else zero. If "Sharia" was specifically mentioned, then the country received a 1 for this variable; else zero. From Table 14, one sees that the mention of Islam as a basis for the legal system tends to be associated with: higher hdi and higher GDP; less corruption; more authoritarianism; less freedom (according to freedom house score and freedom of press ratings); more restrictions on minority religions; more likely to have one official religion; more likely to have minority religions have legal limitations or be illegal (relgStat variable); higher gender-related development index; more girls in secondary school; higher marriage age; more male-biased inheritance; more missing women; and women have better access to land (wrong direction).

Table 15: the correlation of Sharia mentioned as practiced and other variables.

hdi06	battDeath	FHscore	restrMinRel	offRel	RelStat	freePress	grdi
0.3*	0.38**	0.27*	0.46***	0.34**	0.34**	0.26*	0.26

islamLaw	viol	miss	veil	polity70-07	polity90-07	gdp70-07
0.3**	0.4**	0.46**	0.47***	-0.28*	-0.29*	0.37**

From Table 15, one sees that the mention of Sharia is correlated with: higher hdi and higher GDP; more authoritarianism; more battle deaths; less freedom (according to

Freedom House score and freedom of press rating); more restrictions on minority religions; more likely to have Islam as the official state religion; more likely to have legal limitations on minority religions or minority religions are illegal; a greater deficiency of laws protecting women against violence; more missing women; and more obligation for women to wear veil in public. It is interesting that a higher number of battle deaths is associated with both having Islam as the official state religion and with having Sharia law. One would certainly think of a place where Sharia law is practiced as being a more "old-fashioned" Islamic society. Since these places tend to have more battle deaths on own soil, it lends credence to the idea that the (spiritual and physical) descendants of Ishmael would "be a wild donkey of a man, his hand against every man and every man's hand against him."

Divided by Categories

For this section, we look at more descriptive statistics. Instead of merely looking at correlations, I divide the sample into categories based on a particular variable of interest. I then take the means of the other variables with the sample divided into categories. When I divide the sample into the most densely Muslim (95-100% Muslim), medium density (80-94%), and least dense (50-79%), if I say that a variable is highest for the most densely Muslim, and "consistent across categories," I am saying that the variable increases from least dense to medium density, and from medium density to most dense. For instance, in Table 16 below, one can see that HDI in 2000 and 2006 increases consistently as one moves from least dense to most dense. When I say a certain variable moves in the "correct direction," I mean that it accords with my preconceived hypothesis. For instance, if I have divided the sample by difficulty for women in obtaining land,

loans, and other property, I would say that the HDI figures move in the "correct direction" if higher HDI is associated with better access for women, which I have theorized would be conducive to more productive societies.

Divided by Percentage Muslim

Economic Development Statistics

Table 16: the mean economic development statistics of countries divided into categories by percent Muslim.

economic development statistics							
percMus	percMus	hdi00	hdi06	birth	gr90-99	gr00-07	gdp70-07
50-79%	0.64	0.57	0.60	29.68	0.26	4.26	8886
80-94%	0.87	0.62	0.62	29.11	0.29	3.40	7355
95-100%	0.99	0.65	0.73	27.36	0.61	2.92	11558

From Table 16, dividing the countries into three categories, between 50 and 80 percent Muslim, between 80 and 95 percent Muslim, and greater than 95 percent Muslim, and then taking the means for all variables, we notice several facts. First, one notices that conventional economic development statistics tend to rank the more densely Muslim countries higher. HDI in 2000 and 2006, where there are the fewest missing values, the countries' mean HDIs increase as they move into the more densely Muslim categories. For this category in particular, it will be useful to see the division of oil by percentage Muslim, as shown in Table 17. The average barrels exported per day for the most densely Muslim countries is about 1 million, whereas for the two less dense categories the average is around 0.3 million. This may explain some of the patterns in GDP and hdi that I see in this section.

Table 17: average oil exported per country divided by percentage Muslim.

Oil	
percMus	OilExports (bbl/day)
50-79%	318,674
90-94%	294,183
95-100%	1,071,160

The GDP levels for all of the decades under study (1970s, 80s, 90s, 00s) are highest for the greater than 95 percent category, as suggested by the average real GDP from 1970 to 2007 statistic (though the 50 to 80 category beats the 80 to 95 category here). It is clear that the greater than 95 percent Muslim category is much richer than the two less densely Muslim categories. This can probably be explained by the fact that Islam was founded on the Arabian peninsula, and though it spread extensively beyond this area, the lands that have become Muslim that are further from this epicenter have retained a limited population of their old religion before the rise of Islam, though in the regions closest to the founding, any resistance was less enduring. And there are many countries in and around the Arabian Peninsula that are oil or natural gas rich, which can explain their higher degree of economic development.

Development and Gender statistics

Table 18: mean statistics related to gender and development for countries divided by percentage Muslim.

development and gender statistics						
percMus	litFem	grdi	marAge	femDisc	primEd	secEdu
50-79%	68.00	0.56	21.38	4.33	45.61%	46.46%
90-94%	74.23	0.57	21.36	5.28	45.86%	44.24%
95-100%	71.42	0.65	23.50	4.27	45.83%	44.72%

Along with economic development generally come certain changes in the opportunities for women. From Table 18, one sees that the average marriage age for women is higher in the most densely Muslim countries. It is plausible that this is related

to the greater educational opportunities available in the richer most densely Muslim countries, but the statistics for the proportion of girls enrolled in primary education and secondary education do not reflect an advantage for the most densely Muslim countries. The literacy rate of females as a proportion of the literacy rate for males shows that the two more dense categories rank higher than the least dense. But this seems to be inconsistent with the earlier observation that the purely economic development was approximately the same for the two least dense categories, and significantly higher for the most dense. Thus, the most densely Muslim category is significantly richer than the less dense categories, but this is not uniformly translated into higher gender development.

Characteristics of political rule and political/civil freedom

Table 19

Characteristics of political rule and political/civil freedom								
percMus	corrupt	polity70s	polity80s	polity90s	polity00s	battleD	FHscore	freePress
50-79%	2.67	-4.01	-4.75	-3.33	1.07	39,984	4.77	63.91
90-94%	2.65	-5.67	-6.03	-3.92	-2.30	16,746	4.96	69.29
95-100%	3.36	-6.55	-6.71	-4.21	-3.57	117,840	5.20	68.85

From Table 19, one can see that the statistics in this category are more consistent across different variables. Besides the corruption measure, where the most densely Muslim category tends to be the least corrupt, the more densely Muslim countries tend to receive worse scores compared to the least dense in this section. Authoritarianism tends to increase consistently as I move from least dense to medium to most dense. The average battle deaths are significantly higher for the most densely Muslim category compared to the other two. Assuming high battle deaths implies consistent conflicts, then this result supports the description of Ishmael from the Bible noted earlier on in the paper (in footnote 1), with “his hand against every man and every man's hand against him.” The

more densely Muslim countries also perform worse in terms of freeness of societies, as reflected in the freedom house score for political rights and civil liberties and the freedom of the press rating.

Religious Freedom and Religious Law Statistics

Table 20

Religious freedom and Islamic institutions statistics					
percMus	restrMinRel	offRel	relgStat	islamLaw	sharia
50-79%	6.68	0.55	1.36	0.45	0.09
90-94%	7.03	0.67	1.40	0.47	0.00
95-100%	15.84	1.80	2.30	0.85	0.25

From Table 20, one sees that the more densely Muslim countries also tend to grant less religious freedom to minority religions. The restrictions on minority religions increases consistently as one moves from least dense to most dense. The proportion of countries having one official religion as opposed to no official state religion increases consistently as I move from least dense to most dense. And the tendency to have legal limitations on minority religions or for some or all minority religions to be illegal increases consistently as I move from least dense to most dense. As one would expect, the greatest proportion of countries with the mention of Islamic law as a basis for their legal system is in the most densely Muslim category. Also, one fourth of the countries in the most dense category have "Sharia" mentioned, while none in the middle category have it, and only one in the least dense category.

Islamic institutions related to gender

Table 21

islamic institutions related to gender								
percMus	polygamy	parent	inherit	viol	miss	freeMov	veil	landLoanProp
50-79%	0.66	0.83	0.75	0.63	0.13	0.30	0.31	0.51
90-94%	0.91	0.83	0.79	0.64	0.13	0.03	0.28	0.38
95-100%	0.81	0.82	0.98	0.67	0.35	0.25	0.56	0.37

Referring to Table 21, the patterns in this category vary across different variables. There are quite a few missing values in this category, and anomalies in the data could be from missing values. But from what I can see, polygamy is accepted more in the two denser categories relative to the least dense. Inheritance is consistently more male-biased as I move across categories from the least dense to the most dense. A deficiency in legal protection for women against violence increases consistently as I move across categories from least dense to most dense, though the differences between categories is small. There are significantly more missing women in the most dense category compared to the other two. The free movement of women variable is actually worse in the least dense countries. The veil variable is by a significant degree the highest in the most densely Muslim countries; their women tend to be obliged to wear the veil in public. The variables for difficulty for women in obtaining land, loans, and property other than land are in general in the "wrong direction." The most discrimination against women in these variables tends to be in the least densely Muslim countries. I have to remember though, that there are several countries in this category that are 75% Muslim, and the average percentage in this category is 64%. So in comparing the most densely Muslim countries with the least densely Muslim, it is not like I are comparing predominantly Muslim countries with

predominantly Christian countries. I are all still dealing in the same general category of majority Muslim countries.

Conclusion of divided by percent Muslim categories

There are some patterns that emerge from the above analysis. Primarily, the most densely Muslim countries tend to be the most wealthy, but this wealth does not necessarily translate into free and liberal societies. The most densely Muslim also tend to be the most authoritarian and the least free, with the greatest restrictions on minority religions. They also tend to score poorly on certain variables that would tend to make life more difficult for women, such as male-biased inheritance, lack of laws protecting women against violence, and more missing women (which is a sign of preference for males at birth and during childrearing); However, the least densely Muslim tend to score worse on other variables in this category, such as difficulty in obtaining land, loans, or other property for women. Though there is a certain degree of ambiguity in this last category of Islamic institutions related to gender, the fact of ambiguity gives a rebuttal to the theory that wealth brings universal modernization and liberalization of society, since the most densely Muslim are the richest.

Divided by Region

Table 22

demographics			
region	N	percMus	relFrac
Africa	14	0.84	0.28
Asia & Pacif.	12	0.85	0.33
Eur	2	0.85	0.24
N.Af. & M.E.	18	0.90	0.30

Firstly, one should note that from Table 22 we see that the average percent Muslim is highest in the Middle East & North Africa region with 90%, with the other three regions being about 85% Muslim each. Therefore, some of the characterizations of this region relative to the others will parallel the characterizations of the most densely Muslim category in the above analysis for this reason. However, there are many differences, and these differences reveal distinguishing characteristics of the various regions. Another item to note is that the Europe region is composed of only two countries, Turkey and Albania. Therefore, the statistics of this region will be highly influenced by these two countries. When one notices that Europe is an outlier for one particular statistic, it does not necessarily mean that "European Islam" is very distinct in this category. For example, Europe's "violence against women" variable is 0.75, which reflects that there is no legislation in place to protect women against violence; while there is planned legislation, this legislation is of a general nature. This 0.75 is significantly worse than the average for the other regions, but it reflects only the status of said legislation in Albania, as there is a missing value for Turkey here.

Economic development statistics

Table 23

economic development statistics						
region	hdi00	hdi06	birth	gr90-99	gr00-07	gdp70-07
Africa	0.45	0.47	39.02	0.61	2.46	1853.99
Asia & Pacif.	0.65	0.68	25.83	-1.36	5.16	8438.09
Eur	0.77	0.80	15.69	1.39	4.30	4098.82
N.Af. & M.E.	0.70	0.77	24.03	1.38	2.80	16574.51

Referring to Table 23, HDI is the highest for the European countries, but GDP per capita is significantly higher in the Middle East & North Africa compared to the other regions. Also, GDP per capita is higher in the Asia & Pacific countries compared to

Europe, but Europe significantly beats the Asia & Pacific countries in HDI. The birthrate is by far the lowest in Europe. This may be due to European cultural traditions, or just reflecting the fact that the two European countries in the sample have adapted a more "modernized" tradition. The birthrate is by a large margin the highest in sub-Saharan Africa. This likely reflects the significantly lower economic development in Africa, which is generally accompanied by higher birthrates.

Development and gender statistics

Table 24

development and gender statistics						
region	litFem	grdi	marAge	femDisc	primEdu	secEdu
Africa	59.83	0.43	20.18	9.08	0.44	0.44
Asia & Pacif.	78.11	0.61	22.11	3.11	0.46	0.45
Eur	82.00	0.73	23.00	3.15	0.48	0.43
N.Af. & M.E.	75.72	0.70	23.67	2.06	0.47	0.46

Referring to Table 24, sub-Saharan Africa performs the worst in terms of traditional gender development statistics. Out of the remaining three, Europe is the most "modern" in terms of female literacy as a proportion of male literacy, gender-related development index, and primary education, while the Middle East & North Africa region is the most "modern" in terms of marriage age and female discrimination in secondary school.

Characteristics of political rule and political/civil freedom

Table 25

Characteristics of political rule and political/civil freedom								
region	corrupt	polity70s	polity80s	polity90s	polity00s	battleD	FHscore	freePress
Africa	2.48	-5.14	-4.61	-3.45	0.61	20778	4.62	62.15
Asia & Pacif.	2.33	-2.15	-4.33	-2.21	-1.84	80794	5.04	72.08
Eur	4.00	-1.15	-2.70	5.85	7.15	19609	3.00	50.50
N.Af. & M.E.	3.63	-7.80	-8.18	-6.55	-4.97	100236	5.53	70.89

Referring to Table 25, interestingly, the Middle East and North Africa region performs the worst of any region in most categories characterizing aspects of political rule and political/civil freedom, though it is the richest region. Though it is the second least corrupt region (behind Europe), it was the most authoritarian in every decade in our sample (1970s to 2000s), had the least freedom and civil liberties according to the freedom house classifications, was only narrowly beaten by Asia & Pacific for the least freedom of the press, and had by far the greatest average battle deaths of any region. The greatest battle deaths being in the Middle East and North Africa (predominantly Arab, hence physically descended from Ishmael) lend more support to the notion that the sons of Ishmael would be a "wild donkey," consistently in conflict with other nations. The other notable observation about these statistics is that the European countries tend to perform the "best" in each category.

Religious freedom and Islamic institutions statistics

Table 26

Religious freedom and Islamic institutions statistics					
region	restrMinRel	offRel	relgStat	islamLaw	sharia
Africa	6.60	0.71	1.14	0.57	0.07
Asia & Pacif.	11.43	1.00	1.83	0.50	0.17
Eur	7.50	0.00	2.00	0.00	0.00
N.Af. & M.E.	13.96	1.67	2.22	0.83	0.17

Referring to Table 26, the sub-Saharan Africa countries, though the poorest, tend to place the fewest legal restrictions on minority religions. They have the least average restrictions and tend to fall closer to the "no legal limitations" end of the spectrum rather than the "some or all minority religions are illegal" end. The Middle East and North Africa is the worst in this category, with the highest average restrictions on minority religions, the highest percentage of countries with one official religion, and the region most towards the "some or all minority religions are illegal" end of the spectrum. It is interesting to note that though Albania and Turkey both have no official state religion, there are some limitations placed upon minority religions, with Turkey being by far the worst of the two countries. The Middle East & North Africa region has the highest percentage of countries with Islam mentioned as a basis for the legal system, and it ties Asia & Pacific with the highest percentage of Sharia specifically being mentioned.

Islamic institutions related to gender

Table 27

Islamic institutions related to gender								
region	polygamy	parent	inherit	viol	miss	freeMov	veil	landLoanProp
Africa	0.93	0.90	0.81	0.65	0.11	0.16	0.37	0.63
Asia & Pacif.	0.80	0.75	0.73	0.60	0.25	0.33	0.38	0.37
Eur	0.00	0.20	0.20	0.75		0.00	0.00	0.40
N.Af. & M.E.	0.83	0.84	0.96	0.68	0.26	0.20	0.47	0.30

Referring to Table 27, besides the two European countries having on average across most categories the most "modern" of institutions related to gender and Islam (with quite a few missing values for Turkey however), there is no region that performs worst across the board. However, various statistics merit some discussion. Polygamy being the highest in sub-Saharan Africa is probably due to a long-standing cultural tradition rather than an Islamic institution. Sub-Saharan Africa is also the most likely to say that parental authority is not equal between the mother and the father, and be the most difficult place for a woman to obtain land, loans, or other property. The Middle East and North Africa, on the other hand, have the most male-biased inheritance by a significant degree, the most missing women, and the highest obligation to wear the veil in public. While the categories that Sub-Saharan Africa is the worst performer in are not specifically derivable from Islamic institutions, and could simply reflect a general gender discriminatory tradition, two out of the three categories that the Middle East & North Africa are the worst performers in can be specifically traced to early Islamic institutions: the veil is in the Quran and Hadith, and the male-biased inheritance also comes from early Islamic law.

Conclusion of divided by region categories

The Middle East & North Africa stands out as the richest region, and also in some ways the most "Islamic." It has the highest average percent Muslim per country, it is the region with the highest frequency of Islam as the official religion, it contains the most restrictions placed upon minority religions, and it is the region where the veil is obligatory the most. Europe is the most "modern" in many respects, perhaps reflecting the influence of Europe on these countries. A premise of this paper is that the Muslim countries that were penetrated less by European influence will be more "Islamic" and less liberal. The fact that the two European Muslim countries are more liberal in many respects relative to the Middle East and North Africa countries supports this idea.

Divided by Obligation to Wear the Veil in Public

Table 28

Demographics		
obligation	percMus	relFrac
none	0.83	0.31
some or all	0.87	0.32

This variable is actually one of the most interesting in terms of predicting other institutional characteristics, especially those specifically related to gender and arguably Islam.

Economic development statistics

Table 29

economic development statistics						
obligation	hdi00	hdi06	birth	gr90-99	gr00-07	gdp70-07
none	0.66	0.69	26.47	1.46	2.94	9456
some or all	0.53	0.62	31.35	1.43	2.45	8002

Referring to Table 29, Absence of obligation to wear the veil is associated with higher GDP per capita, marginally higher growth, higher hdi, and lower birthrate.

Development and gender statistics

Table 30

development and gender statistics						
obligation	litFem	grdi	marAge	femDisc	primEd	secEdu
none	69.54	0.64	23.62	3.43	0.46	0.45
some or all	69.41	0.56	21.27	4.93	0.45	0.46

Referring to Table 30, Absence of obligation to wear the veil on average corresponds with higher gender-related development index, higher marriage age, and less discrimination against girls in secondary school.

Characteristics of political rule and political/civil freedom

Table 31

Characteristics of political rule and political/civil freedom								
obligation	corrupt	polity70s	polity80s	polity90s	polity00s	battled	FHscore	freePress
none	3.44	-6.89	-6.67	-3.53	-0.63	39710	4.46	61.50
some or all	3.06	-6.02	-6.38	-3.89	-2.17	55733	5.26	69.65

Referring to Table 31, absence of obligation to wear the veil corresponds to less corruption; fewer battle deaths; and more freedom according to the freedom house and freedom of the press ratings, though the polity variable switches throughout the decades.

Religious freedom and Islamic institution statistics

Table 32

Religious freedom and Islamic institution statistics					
obligation	restrMinRel	offRel	relgStat	islamLaw	sharia
none	6.35	1.00	1.71	0.57	0.00
some or all	12.73	1.41	1.88	0.71	0.18

Referring to Table 32, obligation to wear the veil is found with significantly greater restrictions on minority religions, tend to have Islam as the official state religion as opposed to none, and tend to have more legal limitations or else ban minority religions. The group of countries where obligation to wear the veil is absent tend to have Islam mentioned as a basis for their legal system less frequently. They also never have Sharia mentioned.

Islamic institutions related to gender

Table 33

Islamic institutions related to gender								
obligation	polygamy	parent	inherit	viol	miss	freeMov	veil	landLoanProp
none	0.73	0.78	0.74	0.58	0.12	0.01	0.00	0.29
some or all	0.92	0.86	0.96	0.66	0.30	0.36	0.77	0.52

Referring to Table 33, this section is in some ways the most interesting. The differences in other Islamic institutions statistics related to gender are great when predicted by the absence or presence of the obligation to wear the veil. As one can see, absence of obligation to wear the veil is associated with less acceptance of polygamy, greater affirmation of equality in authority between mother and father in the home, less male-biased inheritance, better laws in place to protect women against violence, significantly fewer missing women, almost no restrictions on the free movement of women around the country, and better access for women to land, loans, and other property.

Divided by Women's Access to Land, Loans, and Property

Demographics

Table 34

demographics		
landLoanProp	percMus	relFrac
High access	0.89	0.28
Med access	0.83	0.31
Low access	0.83	0.35

Referring to Table 34, the average percent Muslim tends to be smaller as women's access gets lower. This could be because the sub-Saharan African countries tend to perform the worst on these variables, and they on average have the lowest percent Muslim, with 81% average.

Economic development statistics

Table 35

economic development statistics								
landLoanProp	hdi90	hdi95	hdi00	hdi06	birth	gr90-99	gr00-07	gdp70-07
High access	0.68	0.73	0.76	0.78	21.66	1.57	3.01	14495
Med access	0.61	0.65	0.67	0.70	24.19	1.66	2.47	6049
Low access	0.48	0.47	0.45	0.54	36.13	1.25	2.95	5025

Referring to Table 35, the values are all generally in the correct direction for hdi and birthrate. Less access is associated with lower hdi and a higher birthrate. There do not seem to be any systematic patterns with regards to GDP per capita growth rates. Average GDP is lowest for least access, and the pattern is consistently "lower access, lower GDP" as one moves along categories, except in the case of land, where the middle category is the richest.

Development and gender statistics

Table 36

development and gender statistics						
landLoanProp	litFem	grdi	marAge	femDisc	primEd	secEdu
High access	79.29	0.72	24.29	0.76	0.48	0.48
Med access	71.01	0.63	23.31	1.68	0.47	0.47
Low access	60.57	0.48	20.71	7.91	0.44	0.42

Referring to Table 36, all of the variables here are generally in the "correct direction." That is, as access is reduced, female literacy declines, gender-related development index declines, average marriage age declines, measure of female discrimination in secondary school increases, and primary and secondary education enrollment decreases.

Characteristics of political rule and political/civil freedom

Table 37

Characteristics of political rule and political/civil freedom								
landLoanProp	corrupt	polity70s	polity80s	polity90s	polity00s	battled	FHscore	freePress
High access	3.70	-6.81	-6.73	-5.11	-3.08	74802	5.27	70.05
Med access	3.13	-6.78	-7.21	-3.87	-0.07	65542	4.44	64.06
Low access	2.90	-5.88	-5.90	-2.48	-1.08	28855	4.83	63.32

Referring to Table 37, generally the corruption index trends in the "correct direction." That is, less access corresponds with more corruption. The polity variables don't seem to show a systematic pattern. If anything, more access is associated with more authoritarianism. With regard to battle deaths, there is no consistent pattern across categories, but the countries with the least access tend to have the least battle deaths (contrary to hypothesis). Because authoritarianism and the freedom indices are so closely linked, the places with the most access also tend to be the least free.

Religious freedom and Islamic institution statistics

Table 38

Religious freedom and Islamic institutions statistics					
landLoanProp	restrMinRel	offRel	relgStat	islamLaw	sharia
High access	12.79	1.67	2.17	0.84	0.16
Med access	6.90	0.90	1.91	0.60	0.00
Low access	9.63	0.99	1.60	0.50	0.10

Referring to Table 38, we do not obtain consistent patterns as we move down the scale, but the places with the most access tend to be the most restricted for minority religions. The places with the most access tend to have Islamic law mentioned as a basis for their legal system. This is consistent as we move along the categories.

Islamic institutions related to gender

Table 39

Islamic institutions related to gender						
landLoanProp	polygamy	parent	inherit	viol	miss	freeMov
High access	0.75	0.79	0.86	0.66	0.28	0.09
Med access	0.72	0.78	0.77	0.56	0.17	0.04
Low access	0.94	0.86	0.90	0.63	0.20	0.35

landLoanProp	veil	land	loan	prop	landLoanProp
High access	0.35	0.32	0.04	0.05	0.14
Med access	0.12	0.40	0.29	0.28	0.32
Low access	0.58	0.84	0.53	0.60	0.66

Referring to Table 39, least access is associated with most acceptance of polygamy; least likely to say that mother/father have equal authority in the household; most likely to have male-biased inheritance; protection against violence against women laws are more deficient than average, though not always worst; missing women are average or below average; free movement of women is significantly the most restrictive; the veil is worn the most here. And the variables all go in the "correct direction" one with

another. That is, I have less access in one variable associated with less access in the others.

Divided by Islamic Law: Islam Mentioned as a Basis for the Legal System

Demographics

Table 40

demographics		
islamLaw	percMus	relFrac
0	0.80	0.36
1	0.90	0.26

Referring to Table 40, the countries that have Islamic law on average 90% Muslim versus 80% without, and the religious fractionalization numbers correspond accordingly.

Economic Development Statistics

Table 41

economic development statistics								
islamLaw	hdi90	hdi95	hdi00	hdi06	birth	gr90-99	gr00-07	gdp70-07
0	0.52	0.50	0.55	0.58	31.19	-0.45	3.88	2787.55
1	0.65	0.67	0.69	0.71	26.82	0.96	3.11	13732.48

Referring to Table 41, the countries with Islamic law mentioned tend to be richer, have lower birthrates, and have higher HDI. One possible reason for the great difference in average incomes of the two groups is that the countries with Islam as a basis for their legal system are much more oil-rich. As can be seen in Table 42, they on average export almost 1 million barrels of oil per day, whereas the countries that do not have Islam as an explicit basis of their legal system export on average only about 0.1 million barrels per day.

Table 42

Oil	
islamlaw	OilExports
0	112,636
1	969,014

Development and Gender Statistics

Table 43

development and gender statistics						
islamLaw	litFem	grdi	marAge	femDisc	primEd	secEdu
0	66.20	0.54	20.53	6.30	0.45	0.42
1	74.92	0.64	23.38	3.64	0.46	0.47

Referring to Table 43, corresponding with the economic development statistics, the countries with Islamic law tend to have higher female literacy, better gender-related development index, higher average marrying age, and more females in secondary and primary school.

Characteristics of Political Rule and Political/Civil Freedom

Table 44

Characteristics of political rule and political/civil freedom								
IslamLaw	corrupt	polity70s	polity80s	polity90s	polity00s	battleD	FHscore	freePress
0	2.55	-4.25	-5.68	-1.51	1.94	30,245	4.26	61.82
1	3.22	-6.48	-6.30	-5.36	-4.65	89,038	5.48	71.39

Referring to Table 44, the countries with Islamic law tend to be less corrupt. However, the countries with Islamic law tend to be more authoritarian, have significantly more battle deaths, and be less free according to the freedom house political rights/civil liberties measure and freedom of the press rating.

Religious Freedom and Islamic Institutions Statistics

Table 45

Religious freedom and religious law statistics				
islamLaw	restrMinRel	offRel	relgStat	sharia
0	4.80	0.24	1.24	0.00
1	14.28	1.66	2.10	0.21

Referring to Table 45, the countries with Islamic law also tend to place the most restrictions on minority religions, be the most likely to have one official religion as opposed to no official religion(s), and are closer to the side of "some or all minority religions are illegal" on the spectrum of "in practice, relationship between minority religion(s) and state."

Islamic Institutions Related to Gender

Table 46

islamic institutions related to gender								
islamLaw	polygamy	parent	inherit	viol	miss	freeMov	veil	landLoanProp
0	0.70	0.81	0.69	0.63	0.06	0.18	0.30	0.52
1	0.87	0.83	0.96	0.66	0.31	0.21	0.47	0.35

Referring to Table 46, interestingly, besides the three variables of women's access to land, loans, and property, all of these variables go in the "right direction," though some differences are smaller than others. That is, the Muslim countries where Islam is mentioned as a basis of the legal system tend to be associated with "more backward" or "stricter" or "more old-fashioned" expressions of Islam. They tend to have greater acceptance of polygamy, slightly greater acceptance of the idea that both parents do not share equal authority in the home, more male-biased inheritance, greater deficiency in laws protecting women against violence, far greater missing women, more restrictions on women's free movement, and the obligation to wear the veil in public is more prevalent.

The access to land, loans, and property variables go in the "wrong direction." That is, the presence of Islamic law tends to be associated with more liberal societies when measured along these dimensions. This is partially due to the proportionally greater number of sub-Saharan African countries in the "no Islamic law" category, and the fact that they tend to perform worse on these dimensions.

Conclusion of Islamic Law Section

Here, I have a picture that is similar to what I have found previously. With societies where Islam is mentioned as a basis for their legal system, they are in some sense "more Islamic." They have a greater proportion of Muslims, and tend to be more accepting of traditional Islamic practices, though these may be deemed objectionable to the West, such as polygamy, obligating women to wear the veil, and biasing inheritance to the male. Along certain lines, these countries appear to be better places to live for women and for both genders. They are significantly richer, have a higher hdi, higher literacy rate for females and greater enrollment for females in primary and secondary education, and greater access to land, loans, and property for females. They are also less corrupt compared to the no Islamic law group. However, along other lines, they are a worse place to live for citizens of both genders, and in particular women. They are more authoritarian, more conflict-ridden, and less free. They have greater restrictions placed on minority religions, which would obviously make life more difficult for a member of a minority religion. These societies also tend to be more deficient in laws protecting women against violence, have more missing women, and have more restrictions on the free movement of women. If one thinks of the practice of polygamy, the obligation to

wear the veil, and male-biased inheritance as negative for women, then these places are inferior along these lines as well.

The pattern that I see in the more "Islamic countries" is one of the strong taking advantage of the weak, or the strong ruling in an almost totalitarian way, just because they are strong and they can. In terms of political rule and civil freedom, the more "Islamic" countries tend to be more authoritarian, and have less freedom. This is a case of the strong, the ruling powers, oppressing the weak—the ruled. The religious freedom statistics tell a similar story. The more "Islamic" countries tend to restrict minority religions and in some cases declare them illegal. This is a case of the strong, the majority religion, oppressing the weak—the minority religion. In the places where there is Islamic law and there are more restrictions on minority religions, there are also fewer members of minority religions, which would of course make these minority members even weaker than where there are a greater number. Therefore, it aligns with my hypothesis that the strong will take advantage over the weak because they are strong. And again, when one considers that females are the physically weaker sex, and the sex that has wielded less power in society historically, the higher degree of repression of women found along certain dimensions of the Islamic institutional variables supports the notion of the strong oppressing the weak because they are stronger.

Divided by Restrictions on Minority Religions

Demographics

Table 47

demographics		
restrMinRel	percMus	relFrac
1 low	0.76	0.44
2 medium	0.93	0.21
3 high	0.92	0.23

Referring to Table 47, the places with more restrictions on minority religions tend to have the highest proportion of Muslims in the population and be the least religiously fractionalized. This would make sense under the assumption that where minority religions are greater in numbers, they would have more power and be able to reduce or eradicate legislation that is intended to restrict their rights.

Economic Development Statistics

Table 48

economic development statistics						
restrMinRel	hdi00	hdi06	birth	gr90-99	gr00-07	gdp70-07
1 low	0.53	0.56	33.20	-0.47	3.67	3809.96
2 medium	0.69	0.70	28.59	1.29	1.93	9350.44
3 high	0.67	0.74	23.63	0.46	4.59	15632.78

Referring to Table 48, the places with more restrictions tend to be richer and have higher hdi and lower birthrate. This pattern is "consistent across categories" and the differences between the least restrictions category and the most restrictions category are great. The growth rates don't show consistent patterns. As I saw before, the countries with above average restrictions export on average about 1 million barrels of oil per day, whereas the countries with below average restrictions export about one-quarter million

barrels per day on average, which could explain the difference between the above statistics.

Development and Gender Statistics

Table 49

development and gender statistics						
restrMinRel	litFem	grdi	marAge	femDisc	primEd	secEdu
1 low	63.54	0.51	20.43	6.82	0.45	0.42
2 medium	69.46	0.64	23.83	4.06	0.46	0.47
3 high	81.21	0.68	22.70	2.72	0.46	0.47

Referring to Table 49, the places with the most restrictions tend to perform the best with regards to these statistics. They have the highest female literacy as a proportion of male literacy, the highest score on the gender-related development index, the best score on the female discrimination in secondary school measure, and are approximately tied with the medium category for proportion of females in primary school and secondary school. These statistics are mostly "consistent across categories."

Characteristics of Political Rule and Political/Civil Freedom

Table 50

Characteristics of political rule and political/civil freedom								
restrMinRel	corrupt	polity70s	polity80s	polity90s	polity00s	battleD	FHscore	freePress
1 low	2.64	-4.65	-5.47	-2.22	1.34	25262	4.33	60.40
2 medium	3.28	-5.21	-5.67	-3.79	-3.37	48271	5.30	72.53
3 high	3.01	-7.68	-7.35	-6.05	-4.80	132613	5.43	70.40

Referring to Table 50, the countries with the least restrictions are the most corrupt, though the least corrupt are the medium category. The Polity IV variable reveals that the more restrictions on minority religions the country has, the more authoritarian the country is. This is consistent across categories. The battle deaths also increase consistently as I move across categories from least restrictions to most. I also get less free

as I move from least restrictions to most, as measured by freedom house and freedom of the press ratings.

Religious Freedom and Islamic Institution Statistics

Table 51

Religious freedom statistics					
restrMinRel	restrMinRel	offRel	relgStat	islamLaw	sharia
1 low	1.56	0.25	0.88	0.25	0.00
2 medium	9.73	1.60	2.00	0.87	0.07
3 high	21.66	1.60	2.53	0.80	0.33

Referring to Table 51, the countries with the most restrictions tend to have Islam as their one official religion and to some degree as a basis for their legal system, whereas the countries with few or no restrictions tend to not have an official religion and not have Islam mentioned as a basis for their legal system. The high restriction countries also tend to be closer to the end of the spectrum that "some or all minority religions are illegal." The countries with a low number of restrictions do not have any countries with Sharia law, whereas one-third of the countries with a high number of restrictions have some form of Sharia.

Islamic institutions related to gender

Table 52

islamic institutions related to gender								
restrMinRel	polygamy	parent	inherit	viol	miss	freeMov	veil	landLoanProp
1 low	0.79	0.88	0.77	0.60	0.12	0.17	0.23	0.51
2 medium	0.74	0.85	0.95	0.59	0.21	0.18	0.36	0.31
3 high	0.93	0.70	0.87	0.79	0.31	0.27	0.79	0.42

Referring to Table 52, the places with higher number of restrictions tend to be the most accepting of polygamy, have more male-biased inheritance, the most deficiency in laws protecting women against violence, the most missing women, the greatest

restrictions on free movement of women, and the veil is most obligatory. However, they tend to believe in equality of parents relatively more, and less restrictions upon women with regards to access to land and loans.

Divided by Exindex1

I created "extremity indexes" by normalizing variables that seemed important predictors of societal or economic variables, and then taking a simple average or a weighted average of the variables. The higher a country is on this index, the more "extreme" it is, because I consider discrimination against girls in education, obligation to wear the veil in public, and restricted access for women to land, loans, and other property to all be indicators of a more "extreme" or backward expression of Islam in the society (one less open historically to adapting Western norms). I demonstrated above where these variables are linked with other negative societal outcomes. Exindex1 is equal to (1/6)*(FemDisc + FemLit + Veil + Land + Loan + Prop), while Exindex2 is equal to (1/4)*(FemDisc + FemDiscPrim + Veil + (1/3)*(Land + Loan + Prop)).

Demographics

Table 53

demographics		
Exindex1	percMus	relFrac
1. high	0.81	0.39
2. medium	0.91	0.20
3. low	0.87	0.31

Referring to Table 53, the "most extreme" has significantly the smallest percentage Muslims in this index (81%), while the medium category has the most (91%).

Economic Development Statistics

Table 54

economic development statistics								
Exindex1	hdi90	hdi95	hdi00	hdi06	birthrate	gr90-99	gr00-07	gdp70-07
1. high	0.48	0.46	0.40	0.48	39.29	0.28	3.84	3713
2. medium	0.58	0.61	0.66	0.68	26.55	0.89	2.10	8149
3. low	0.68	0.71	0.74	0.79	19.42	0.71	4.83	14416

Referring to Table 54, these statistics are all what one would expect: that is, the most extreme performs the worst in terms of hdi (for all years) and average real GDP. It also has the highest birthrate. These numbers are consistent across categories, and the differences are large.

Development and Gender Statistics

Table 55

development and gender statistics						
Exindex1	litFem	grdi	marAge	femDisc	primEd	secEdu
1. high	55.15	0.43	20.33	10.59	0.42	0.40
2. medium	73.42	0.64	22.22	4.06	0.47	0.45
3. low	87.93	0.73	24.45	-0.76	0.48	0.50

Referring to Table 55, these statistics also all go in the direction one would expect. The most extreme have the lowest percentage of female literacy to male literacy (consistent across categories, but part of the measure), the lowest gender-related development index (consistent), the lowest average marriage age (consistent), the highest femDisc (consistent, but part of the measure), and the least number of girls in school (consistent).

Characteristics of Political Rule and Political/Civil Freedom

Table 56

Characteristics of political rule and political/civil freedom								
Exindex1	corrupt	polity70s	polity80s	polity90s	polity00s	battleD	FHscore	freePress
1. high	2.42	-5.84	-6.26	-3.91	-2.24	103523	4.92	64.00
2. medium	3.46	-6.52	-6.42	-2.24	-0.04	36339	4.62	64.92
3. low	3.46	-5.80	-6.72	-5.57	-3.22	63356	5.21	69.36

Referring to Table 56, the most extreme here are the most corrupt and have the highest number of battle deaths, but they are not the most authoritarian, in fact they are the least in three out of four decades, they are not the least free either.

Religious Freedom and Islamic Institution Statistics

Table 57

Religious freedom statistics					
Exindex1	restrMinRel	offRel	relgStat	islamLaw	sharia
1. high	10.88	0.92	1.62	0.62	0.15
2. medium	10.57	1.23	1.85	0.62	0.15
3. low	11.97	1.29	2.00	0.64	0.00

Referring to Table 57, interestingly, the "most extreme" here are not the worst places to live for members of minority religions. The least extreme in this index tends to perform worse in these statistics. The differences in the Islamic law statistic are negligible between categories here, though the least extreme has complete absence of Sharia.

Islamic Institutions Related to Gender

Table 58

islamic institutions related to gender								
Exindex1	polygamy	parent	inherit	viol	miss	freeMov	veil	landLoanProp
1. high	0.95	0.92	0.94	0.75	0.25	0.36	0.58	0.71
2. medium	0.78	0.76	0.81	0.51	0.27	0.13	0.43	0.36
3. low	0.64	0.77	0.81	0.65	0.13	0.06	0.13	0.11

Referring to Table 58, these variables all generally go in the "right direction."

Divided by Exindex2

Demographics

Table 59

demographics		
Exindex2	percMus	relFrac
high	0.88	0.31
medium	0.84	0.29
low	0.87	0.29

Referring to Table 59, the distribution of percent Muslim is mostly equal across categories.

Economic Development Statistics

Table 60

economic development statistics						
Exindex2	hdi00	hdi06	birth	gr90-99	gr00-07	gdp70-07
1. high	0.50	0.57	35.93	0.72	3.05	7889
2. medium	0.59	0.63	28.54	-0.19	2.79	3481
3. low	0.75	0.77	19.41	0.49	4.64	18594

Referring to Table 60, greater extremity is linked with lower hdi and higher birthrate, which is consistent across categories. The least extreme are by far the richest, though the most extreme are richer than the middle category.

Development and Gender Statistics

Table 61

Development and gender statistics						
Exindex2	litFem	grdi	marrAge	femDisc	primEd	secEdu
High	65.43	0.52	20.58	9.89	0.42	0.41
Medium	66.71	0.58	21.82	4.05	0.46	0.45
Low	89.00	0.72	24.25	-0.46	0.48	0.50

Referring to Table 61, since female discrimination in school is part of our index, it is natural that greater equality in female literacy and gender-related development is found with lower extremity with this index.

Characteristics of Political Rule and Political/Civil Freedom

Table 62

Characteristics of political rule and political/civil freedom								
Exindex2	corrupt	polity70s	polity80s	polity90s	polity00s	battleD	FHscore	freePress
1. high	2.75	-7.19	-6.52	-4.14	-2.65	91332	5.43	70.20
2. med.	2.93	-4.48	-6.18	-2.51	0.49	51654	4.33	59.87
3. low	3.29	-5.38	-5.27	-5.28	-4.33	49444	5.32	72.93

Referring to Table 62, greater extremity is associated with more corruption and more battle deaths, which is consistent across categories. However, the authoritarianism and freedom variables do not show consistent patterns.

Religious Freedom and Islamic Institution Statistics

Table 63

Religious freedom statistics					
Exindex2	restrMinRel	offRel	relgStat	islamLaw	sharia
1. high	12.19	1.20	1.87	0.73	0.33
2. medium	8.27	0.93	1.53	0.47	0.00
3. low	11.93	1.20	1.93	0.73	0.07

Referring to Table 63, the variables in this section also do not show consistent patterns across most of the variables. The most extreme does however by far have the

most instances of Sharia law. Along this dimension I can link the extremity index to a more "Islamic" society.

Islamic Institutions Related to Gender

Table 64

islamic institutions related to gender								
Exindex2	polygamy	parent	inherit	viol	miss	freeMov	veil	landLoanProp
1. high	0.97	0.91	0.92	0.77	0.31	0.37	0.69	0.58
2. medium	0.69	0.78	0.81	0.53	0.16	0.10	0.30	0.38
3. low	0.67	0.71	0.81	0.64	0.08	0.00	0.00	0.11

Referring to Table 64, these variables generally go in the "correct direction." The more extreme countries tend to have a higher acceptance of polygamy; tend to not see parental authority as equal between mother and father; tend to bias inheritance toward the male; tend to have a greater deficiency in laws protecting women against violence; tend to have more missing women; and tend to have greater restrictions on the free movement of women (and since it is a part of the index, naturally have greater obligation to wear the veil and less access to land, loan, and property).

CHAPTER 4

ECONOMETRIC ANALYSIS AND RESULTS

I want to examine the relationship between economic outcomes and scores on the extremity scales. I hypothesize that a high score on the extremity index will be disadvantageous to having high levels of economic growth. To test that hypothesis, I run regressions where the dependent variable is the average growth over one of three periods, 1990 to 1999, 2000 to 2007, and 1990 to 2007. The reason for examining the effects in the two decades separately is that there was a boom in oil prices in the 2000s, whereas there was not in the 1990s. The control variables include the natural logarithm of the GDP level in an earlier year (1970) to control for initial condition; school life expectancy as a control for average human capital; a dummy variable for if a country is a producer of oil; and a measure of the price level of investment in the first year of the decade-long period.

Extremity Indexes and 1990s Growth

Table 65

Dependent variable = gdpGrowth90to99				
Regression	(1)	(2)	(3)	(4)
Exindex1	-7.85***	-5.86***		
	(0.001)	(0.006)		
Exindex2			-6.30***	-5.31**
			(0.006)	(0.016)
lnGDP70	-0.355	-0.43	-0.444	-0.343
	(0.309)	(0.253)	0.21	(0.345)
Price investment 1990	0.0175**		0.0205***	
	(0.011)		(0.005)	
oilexporter	2.75***		2.77***	
	(0.003)		(0.004)	
schoolLifeExpectancy	-0.425**		-0.292	
	(0.027)		(0.118)	
Constant	7.88**	6.84*	5.81**	5.25
	(0.014)	(0.06)	(0.048)	(0.124)
N	35	36	36	38
R^2	0.55	0.21	0.49	0.15
Adj. R^2	0.48	0.16	0.41	0.11

As one can see from Table 65 above, the extremity indexes are found to have a negative and statistically significant relationship with average growth over the period 1990-1999. That is, the more extreme, the lower the average growth rate. For exindex1 and exindex2, I have strong negative coefficients in the regressions with full controls (lnGDP70, pi1990, oilexporter, and schoolLifeExpectancy), and I also have strong negative coefficients for when I merely control for initial economic conditions (lnGDP70).

Extremity Indexes and 2000s Growth

Table 66

Dependent variable = gdpGrowth00to07			
Regression	(1)	(2)	(3)
Exindex1	4.54		
	(0.110)		
Exindex2		5.83**	5.93**
		(0.024)	(0.023)
lnGDP70	-0.514	-0.574	-0.481
	(0.306)	(0.199)	(0.279)
pi2000	-0.0185	-0.021	-0.027**
	(0.243)	(0.152)	(0.047)
oilexporter	1.61	1.46	
	(0.169)	(0.188)	
schoolLifeExpectancy	0.301	0.336	0.43**
	(0.209)	(0.115)	(0.037)
Constant	2.91	3.25	2.92
	(0.456)	(0.326)	(0.381)
N	35	36	36
R^2	0.31	0.36	0.32
Adj. R^2	0.19	0.26	0.24

From Table 66 above, one can see that the regression coefficients for the extremity indexes are now positive. Exindex3 is not quite significant at the 0.10 level, but exindex8 is significant at the 0.05 level for a specification with the full set of controls and the specification with the oil dummy removed. In fact, all the various forms of the extremity index tested flipped signs from the 90s decade to the 2000s. It is surprising that the sign flipped, and casts doubt upon the validity of the extremity indexes as factors in determining growth rates, upon the hypothesis that more extremity leads to lower growth. The following section investigates this issue further, focusing on oil's possible role in disturbing the visible link between institutional variables and growth outcomes.

Investigation into Why the Changed Sign

Extremity Indexes and 1990 to 2007 Growth

Table 67

Dependent variable = gdpGrowth90to07		
Regression	(1)	(2)
Exindex1	-2.05	
	(0.130)	
Exindex2		-0.68
		(0.609)
lnGDP70	-0.495**	-0.57**
	(0.027)	(0.011)
Price investment 1990	0.004	0.005
	(0.295)	(0.214)
oilexporter	2.57***	2.54***
	(0.000)	(0.000)
schoolLifeExpectancy	-0.10	-0.017
	(0.384)	(0.877)
Constant	5.81***	4.93***
	(0.004)	(0.008)
N	35	36
R^2	0.55	0.52
Adj. R^2	0.48	0.44

From Table 67, one can see that oil is a very important determinant of average growth rates over the whole period of 1990-2007. In fact it is the most significant explanatory factor (with p-value = 0.000), while the initial condition is also a statistically significant variable, with the negative coefficient lending credence to the convergence hypothesis. Our extremity indexes are not significant over this averaged time period.

Blurring Institutional Variables

Table 68

Dependent variable = gdpGrowth90to99, (1), (3), (5), (7); =gdpGrowth00to07 (2), (4), (6), (8)								
Regression	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
corruption	0.87**	-0.09						
	(0.014)	(0.818)						
polity70s-00s			0.20*	-0.062				
			(0.060)	(0.594)				
Birthrate					-0.13***	-0.03	-0.086*	0.027
					(0.002)	(0.472)	(0.083)	(0.622)
lnGDP70	-0.73**	-0.26	0.079	-0.3	-0.54	-0.30	-0.54*	-0.36
	(0.046)	(0.559)	(0.813)	(0.489)	(0.105)	(0.457)	(0.099)	(0.349)
PriceInvest90	0.017***		0.018***		0.017***		0.015**	
	(0.005)		(0.006)		(0.007)		(0.014)	
PriceInvest00		-0.024*		-0.025		-0.028**		-0.021
		(0.077)		(0.069)		(0.034)		(0.106)
oilexporter	2.45***	1.85*	2.63	1.60			1.62	2.23*
	(0.005)	(0.073)	(0.004)	(0.128)			(0.136)	(0.079)
Constant	0.89	6.05	-2.38	5.93	7.50**	8.39**	5.3	5.31
	(0.714)	(0.045)	0.366	(0.056)	(0.036)	(0.04)	(0.157)	(0.21)
N	37	37	36	36	38	38	38	38
R^2	0.47	0.25	0.43	0.24	0.38	0.17	0.42	0.25
Adj. R^2	0.41	0.15	0.36	0.14	0.32	0.10	0.35	0.16

The above figures in Table 68 lend support to the idea that the boom in oil prices in the 2000s could have had the effect of distorting or covering up the effect of various institutional variables' effects on growth. Comparing regressions (1) and (2) where corruption is the independent variable of interest, and the regressions are specified for the 90s and 2000s, respectively, one sees that in the 1990s, the variable corruption has a positive relationship with growth (corruption is coded so that a higher score on a scale of 1 to 10 corresponds to less corruption). This is an expected and uncontroversial finding.

However, in the parallel regression for the 2000s, one sees that the variable has the wrong sign and is in fact completely insignificant.

The polityIV variable rates regimes on degree of authoritarianism and is coded from -10 to +10, with -10 being the most authoritarian rating possible, and +10 being the most democratic rating possible. In the 90s, having a higher average polity variable over the last 40 years corresponded to having higher growth, which generally corroborates with political science theories and findings. In the 2000s, the coefficient is of the wrong sign and is completely insignificant.

Birthrate is often found to be negatively associated with growth. Places that have higher birthrates generally have lower growth rates. This is true in the 1990s, with or without a control dummy variable for oil (see (5) and (7)), but this coefficient is insignificant in the 2000s. These patterns hint that the effects on growth of certain important institutional variables will be distorted or blurred in the 2000s relative to the 90s, and the best explanation I can think of is that oil was such a dominant factor in the growth of the 2000s with the boom in prices, that other variables mattered less than they otherwise would have.

The Switching Decades: 1990s Versus 2000s

Though the above explanation may be adequate to explain the presence of an anomaly in the change in a coefficient from significant and in the expected direction to insignificant, further explanation is warranted for the switch in sign and remaining significance found in the extremity indexes between the 1990s and 2000s.

Table 69

Dependent variable = gdpGrowth for various decades. (1), (2), (3) are for Muslim countries; (4), (5), (6) are for the world.						
Regression	(1)	(2)	(3)	(4)	(5)	(6)
dependent variable	00s	90s	80s	00s	90s	80s
90s	-0.43***			0.12*		
	(0.007)			(0.088)		
80s		0.23*			0.26***	
		(0.082)			(0.001)	
70s			-0.15			0.084
			(0.212)			(0.254)
Constant	3.58***	0.83*	-0.12	3.0***	1.22***	0.71**
	(0.000)	(0.073)	(0.849)	(0.000)	(0.000)	(0.029)
N	45	38	38	188	165	164
R^2	0.16	0.08	0.04	0.02	0.07	0.01
Adj. R^2	0.14	0.06	0.02	0.01	0.06	0.00

Table 69 above is composed of regressions where the dependent variable is average growth rate in a particular decade and the independent variable is average growth rate in the preceding decade. The first three regressions include only Muslim majority countries, and the last three include all countries of the world. Examining regression (1), I see that higher growth in the 90s predicted lower growth in the 00s. This coefficient is economically large and statistically significant. The adjusted R^2 is also large compared to the other regressions. By contrast, I see in (2) that the relationship between growth in the 90s and growth in the 80s in the Muslim countries was positive, with a smaller coefficient, a lower significance level, and a lower R^2 value; moreover, though the calculated relationship between growth in the 80s and growth in the 70s is negative, the coefficient is small and statistically insignificant, with a very low adjusted R^2. These comparisons hint that the relationship between the 2000s and the 90s was an unusual one. The three regressions comparing growth in one decade to growth in the preceding decade

in the whole world also tell us that what was found in the Muslim world was unusual. The significant and insignificant relationships found in (4), (5), and (6) are positive, and the adjusted R^2 is very low. These findings lead us to surmise that the relatively low oil prices in the 90s followed by the boom in prices in the 2000s explains a significant part of the variation in growth rates from the 90s decade to the 2000s in the Muslim countries.

In both decades, oil contributed to growth, but in the 90s, I theorize that the detrimental effects of a more oppressive society were able to seep through and affect growth rates, while in the 2000s, with growth increasing so much within the sample, those same countries that had lesser growth rates due to higher extremity would now have higher growth rates due to the irrelevance in the extremity index caused by the boom in oil prices. Here is another way of expressing what could have happened. Imagine two countries, Extreme and Tolerant: both have a primary commodity such as oil. The two countries are identical except that the government of Extreme restricts some of its people economically, while Tolerant does not. During period 1, oil prices are low. In this period, while the people of Extreme and Tolerant have to work in many sectors of the economy in order to produce and trade and eat, Extreme will have lower productivity and lower growth since some workers are taken out of the workforce. In period 2, when oil prices are booming, assume that each country receives an equally large windfall of money from selling their oil reserves. With equal income increases in both countries from selling oil, the country that was originally poorer from period 1, Extreme, will have the higher growth rates in period 2, and it will look like higher extremity corresponds with lower growth in period 1 and higher growth in period 2. This is not a doubtlessly verified

hypothesis, but merely an untested theory for attempting to understand the observed phenomenon.

One way to check if the extremity indexes are legitimate is to see how they perform in predicted growth in the 1980s and 1970s. The following regression results shown in Table 70 show that the extremity indexes are still important in explaining the variation in growth rates in the 1980s and the 1970s, and the more extreme countries are associated with lower growth rates. This is evidence that the extremity indexes' importance in explaining growth was not just a fluke for the 1990s. Rather, the general trend is that a more extreme country will grow slower, with the opposite sign of the 2000s being the anomaly, which was explained above.

Table 70

Dependent variable = gdpGrowth for various decades.			
Regression	(1)	(2)	(3)
dependent variable	80s	70s	70s
Exindex1			-8.74***
			(0.002)
Exindex2	-4.43**	-7.49***	
	(0.022)	(0.004)	
lnGDP70	-2.14***		
	(0.000)		
lnGDP60		-1.57*	-2.72***
		(0.051)	(0.002)
Price investment 1980	-0.01*		
	(0.072)		
Price investment 1970		0.00	0.00
		(0.917)	(0.993)
oilexporter	0.89	1.11	0.401
	(0.302)	(0.208)	(0.653)
Constant	19.0***	2.75**	20.8***
	(0.000)	(0.015)	(0.004)
N	38	20	20
R^2	0.62	0.54	0.56
Adj. R^2	0.58	0.41	0.44

Regressions were attempted to explore the effect of being a more explicitly "Islamic" country based on having Islamic law or Sharia as a basis for the legal system, but these variables did not obtain significant results with regards to growth rates.

CHAPTER 5

CONCLUSION

The purpose of this paper was to shed light on the broad question of why Muslim countries generally lag behind the West economically, and to do so by testing the hypothesis that more extreme, strict, or old-fashioned Muslim societies grow more slowly compared to their relatively more culturally liberal/modern coreligionists, which would tell us that there may be something inherent in a strict, extreme form of Islam that hinders growth.

It was found that a more explicitly "Islamic" Muslim country--as measured by Islam being the official state religion, Islam being an explicit source for the legal system, and having Sharia—was associated with various societal "bads," such as more restrictions on minority religions, greater authoritarianism and less freedom, more battle deaths, and various poor outcomes for women related to their freedom and rights. Nonetheless, these countries did not experience inferior growth relative to their more liberal counterparts according to this dimension. In fact, they were on the whole richer than their counterparts. These countries are also on the whole much more oil rich, which may explain why they are wealthier.

While I did not obtain the hypothesized result that a more explicitly "Islamic" Muslim country based on legal system would grow more slowly, I did obtain that a more "extreme" Muslim country, as measured by the treatment of women in the country along the lines of equality in education, obligation to wear the veil in public, and access to land, loans, and property would grow more slowly in general, after controlling for initial

income, whether the country exported a significant amount of oil, average school life expectancy, and initial investment level. Greater extremity as measured by this variable was associated with lower growth rates in the decades of the 90s, 80s, and 70s, but higher growth rates in the 2000s. I attempted to explain this odd result with an argument based on the oil boom of the 2000s obfuscating the visible effect of institutional factors.

Perhaps the reason why countries that were more repressive of women tended to grow more slowly, whereas countries that were more repressive towards minority religions did not is due to the fact that women make up about one-half of the people, and restricting them economically could have a great effect on stifling overall productivity, whereas in the countries that were least amenable to minority religions, the percentage of non-Muslims in the country was low, and any difficulty they would experience in their economic life would have an insubstantial effect on the overall productivity of the country.

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